



Prevalence And Risk Factors Of Work Related Musculoskeletal Disorders Among Tailors In Rivers East Senatorial District, Rivers State

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ABSTRACT

This study focused on the prevalence and risk factors of work related musculoskeletal disorders among tailors in Rivers East Senatorial District, Rivers State. The population for this study comprised of all tailors in Rivers East Senatorial District, Rivers State. Descriptive cross-sectional survey design was adopted for the study. The sample size was eight hundred and eighty respondents. Data was collected using a self-structured questionnaire and was analyzed using descriptive statistics such as frequencies, percentages, mean and standard deviation. The finding of the study revealed that more than half 501(67.7%) of the respondents had high prevalence of musculoskeletal disorders. The result further showed that 460(62.2%) of the respondents experienced neck pain after work, 469(63.4%) experienced difficulties in moving shoulder after work, 213(28.8%) had elbow pains, 584(78.9%) had wrist/hand pains, 583(78.9%) had upper back pains, 637(86.1%) had lower back pains, 570(77.0%) had hip/thighs/buttock pains, 562(75.9%) had knee pain while 428(57.8%) had pains at the ankle/feet. It showed there were risk factors of work related musculoskeletal disorders among tailors with a grand mean 2.62. It was concluded that the prevalence and risk factors of WRMDs was high among tailors. Hence, there is need for regular health education for the prevention work related musculoskeletal disorders among tailors.

Keywords: musculoskeletal disorders, prevalence, risk factors, coping strategies

INTRODUCTION

Tailoring job (a person who makes, repairs, or alters clothing professionally, especially suits and men's clothing) is one of the fastest growing occupations in Nigeria, and as a result of their demand tailors are faced with work related musculoskeletal disorders (WMSDs). They are particularly common among workers who spend much of their time in course of their work, and cloth making workers are no exception. Nwaogazie et al (2016) asserted that musculoskeletal disorders are named according to the body parts affected. The body parts frequently affected are arm, neck, shoulder and lower back, and diverse names are given to arm, neck and shoulder musculoskeletal disorders depending on the country of origin. For example cervicobrachial syndrome in Japan, repetitive strain injury in Australia, cumulative trauma disorders of the upper extremity in North America and work-related upper extremity musculoskeletal disorders.

The prevalence of (WMSDs) varies among tailors operators around the world. It was estimated that 76% prevalent rate of (WMSDs) occur among sewing machine operators in Portugal ranging from wrist/hand (42%), neck (32%) low back (30%) and shoulders (23%) were the most affected body parts. In Denmark, it was reported prevalence of 15% and 5.8% for myofascial pain syndrome and rotator cuff tendinitis respectively among sewing machine operators. The prevalence of moderate to

severe musculoskeletal pain in the neck/shoulder region and distal upper extremity were 24% and 16% respectively among sewing machine operators in Los Angeles. A result of a study on ergonomics issues among sewing machine operators in the textile manufacturing industry in Botswana revealed a high prevalence of WMSDs with a concluding results that back, neck and shoulder discomfort were highly prevalent among the sewing machine operators surveyed (Maduagwu et al., 2015).

However, in Rivers State Nigeria, especially in Rivers East Senatorial District. Studies on WMSDs among tailors are not easily available for referencing. A survey study on the prevalence, pattern, impact, risk factors and the most frequently affected anatomical parts of the body in musculoskeletal disorders among sewing machine operators revealed that a 12-months prevalence of musculoskeletal disorders was observed to be 92.0%. The four major job risk factors identified in this study were prolonged sitting (99.4%), sitting on a high chair (76.5%), sitting without back rest (71.5%) and sitting on a low chair (24.0%). The age, frequency of sewing and years of sewing experience on sitting to sew, standing to cut and ironing were significantly associated with prevalence of musculoskeletal disorders (Maduagwu et al., 2015).

Akinpelu et al (2016) added that among tailors, working posture is constrained by the eyes for visual control of the work, the hands for directing the sewing material, and the feet for speed control of the work. It was observed that sewing machine operators/operators' activities have been observed to be characterized by the following: Varying, poorly structured, and poorly organized jobs with respect to products, processes, and operations, performed both individually and in groups, repetitive and burdensome tasks, congested and limited workspaces, poorly designed sewing machines, and other equipment, resulting in uncomfortable, crouched, or forward leaning sitting postures, prolonged gripping and pinching with considerable forces, tight schedules, often requiring hurrying in performing tasks, few and short rest pauses, frequent sharp neck and trunk bending among taller workers, or moderate bending among shorter workers, lack of control over work; and reluctance to report stressful or unsafe working conditions for fear of being dismissed however, in Nigeria and especially in Rivers State, these characteristics would likely be observed in the work environment and job activities of sewing machine operators in self-employment or small scale textile industries.

Akanbi and Ikemefuna (2010) reported that the commonest musculoskeletal risk factors among tailors are adaptation of awkward posture due to poorly designed seating devices that lack adjustable seat heights and back rests, and repetitive nature of sewing machine operators' tasks such as pedaling, and extreme flexion of the trunk and neck. Sealetsa and Thatcher (2011) also found that the workstations of the sewing machine operators, especially the sitting devices, were of various types and designs without consideration to ergonomic requirements. Every sewing machine operator surveyed used foot-operated sewing machine with the machine serving as work table. However, Tafese et al (2014) studied predictors of occupational exposure to neck and shoulder musculoskeletal disorders among sewing machine operators of garment industries in Ethiopia found that year of services, medical history of systemic illness, personal and environmental factors were identified as the potential risk factors related to neck and shoulder musculoskeletal disorders among the study group including performing same task over and over again, not having enough rest breaks during the day, inadequate training on injury prevention, working many days in a week, attending to a large number of customers in a day etc. This makes them to be vulnerable to stress, diseases, psychological challenges and poor health. Therefore, this study investigates the prevalence and risk factors of work related musculoskeletal disorders among tailors in Rivers East Senatorial District.

RESEARCH METHODS

The study adopted a descriptive research design. The population of the study consisted of tailors in Rivers East Senatorial District, Rivers State. A sample size of 800 respondents was used for the study. Simple random sampling techniques was used to select two wards from each Local Government Areas, 50 tailors were selected from 2 wards each using non proportionate sampling techniques. This gave a total of 100 tailors from each Local Government Area. The respondents were selected through accidental sampling since tailors have no functional union as at the time of this study. A self-developed and structured questionnaire was composed to extract information on the variables of the study. The researcher personally administered the questionnaire to respondents. The questionnaire was designed to obtain responses using alternative responses pattern. Data collected were entered into

the computer using Statistical Package for Social Science (SPSS 20.0) software for analysis and data were presented using frequency tables and percentages.

RESULTS

Research Question 1: *What is the prevalence of work related musculoskeletal disorders among tailors in Rivers East Senatorial District, Rivers State?*

Table 4.1: Prevalence of work related musculoskeletal disorders among tailors

Items	Experience of WMSDs		Decision
	Yes F(%)	No F(%)	
Do you experience neck pain after work	460(62.2)	280(37.8)	High
Does your shoulder become difficult to move after work	469(63.4)	271(36.6)	High
Do you experience elbow pain	213(28.8)	527(71.2)	Low
Do you experience wrist/hand pain	584(78.9)	156(21.1)	High
Does your upper back strain you	583(78.8)	157(21.2)	High
Do you have lower back pain	637(86.1)	103(13.9)	High
Does your hip/thighs/buttock pain you due to work overload	570(77.0)	170(23.0)	High
Do you have knee pain	562(75.9)	178(24.1)	High
Do you always have pain at the ankle/feet	428(57.8)	312(42.2)	High
Total	501(67.7)	239(32.3)	High

Decision: less than 50% = Low; above 50% = High

Table 4.1 showed the prevalence of various musculoskeletal disorders among the study population. The result showed that 460(62.2%) of the respondents experienced neck pain after work, 469(63.4%) experienced difficulties in moving shoulder after work, 213(28.8%) had elbow pains, 584(78.9%) had wrist/hand pains, 583(78.9%) had upper back pains, 637(86.1%) had lower back pains, 570(77.0%) had hip/thighs/buttock pains, 562(75.9%) had knee pain while 428(57.8%) had pains at the ankle/feet. The result also showed that more than half 501(67.7%) of the respondents had high prevalence of musculoskeletal disorders.

Research Question 2: *What are the risk factors of work related musculoskeletal disorders among tailors in Rivers East Senatorial District, Rivers State?*

Table 4.2: Risk factors of work related musculoskeletal disorders among tailors (n=740)

Risk factors	Mean	Std. Deviation
Performing same task over and over again	3.07	.88
Not enough rest breaks during the day	2.29	.99
Working in awkward positions	2.75	.96
Working in same position for long periods	2.66	1.08
Bending back in awkward way	2.79	1.12
Reaching away from body	2.74	1.19
Working at or near physical limits	3.02	.92
Continuing to work when injured or hurt	1.79	1.01
Inadequate training on injury prevention	2.59	1.10
Carrying heavy items, e.g. sewing machine	2.32	1.11
Working many days in a week	2.68	.75
attending to a large number of customers in a day	2.64	1.04
Grand Mean	2.62	0.92

Table 4.2 showed the risk factors of work related musculoskeletal disorders among tailors. The table showed that the grand mean = 2.62 is greater than the criterion mean = 2.50. This indicates that the following risk factors contribute to work related musculoskeletal disorders among tailors.

DISCUSSION OF FINDINGS

The result showed that more than half of the respondents had high prevalence of musculoskeletal disorders. This shows that work related musculoskeletal disorders is more prevalent among

respondents with most of them affecting the neck, shoulder, elbow, wrist/hand, upper/lower back. The findings of the study corroborates with that of Banerjee et al (2016) and Hassan et al (2018) whose study discovered that the prevalence of work related musculoskeletal disorders among tailors was high. The study of Maduagwu et al (2015) carried out in Nigeria also confirm the findings of the present study as it found out that the prevalence of work related musculoskeletal disorders among tailors is higher than 50%. The finding of the study is in line with the studies of Akabi and Ikemefuna (2010), Sealesta and Thatcher (2011) who reported the prevalence of work related musculoskeletal disorders among tailors.

The studies of Ransankar and Ruma (2020) agrees with the finding of the present study including that of Kazemi et al (2018) where they reported the prevalence of work related musculoskeletal disorders among tailors. This indicates that work related musculoskeletal disorders are prevalent among tailors. This may also be attributed to the fact that musculoskeletal organs of the body are frequently used by tailors without any form of rest or coping strategies for proper prevention. However, the studies of Wang (2007) and Kebe-Deyvas and Tafese (2014) found a lower prevalence of work related musculoskeletal disorders among tailors. This shows that these tailors may be adopting one form of coping strategy or the other to prevent these disorders. However, the similarities as noted in these studies might be attributed to the fact that tailors face the same musculoskeletal challenges. Hence, tailors need proper health education and sensitization on the prevention of work related musculoskeletal disorders.

The findings of the study shows that risk factors contribute to work related musculoskeletal disorders among tailors. This shows that work related musculoskeletal disorders affects tailors as a result of some factors. The findings of the study confirm with that of Gopal et al (2012) who discovered that some factors such as working hours and working in awkward positions. The finding of study is also in line with that of Habib (2015) who discovered that there are risk factors that contributes to work related musculoskeletal disorders among tailors. The study of Tafese et al (2014) confirms the findings of the present study as it reported that performing same task over and over again contributes to work related musculoskeletal disorders among tailors such as working many days in a week and attending to a large numbers of customers in a day. This might be attributed to the fact that there are factors that actually contribute to the prevalence of work related musculoskeletal disorders among tailors especially if these factors are not properly managed and prevented among tailors. However, repetitive use of the arm, legs and constant sitting position noticed among tailors might play important roles in the similarities as reported in the present and previous studies.

CONCLUSION

Based on the findings of the study, it was concluded that the prevalence and risk factors of WRMDs was high among tailors. Hence, there is need for regular health education for the prevention work related musculoskeletal disorders among tailors in Rivers East Senatorial District, Rivers State.

RECOMMENDATIONS

In view of the findings of this study, the following recommendations were made:

1. Training should be given by relevant stakeholders in areas such as hazards and risks in tailoring control measures to minimize risks, coping strategies and seeking medical advice.
2. Ministries in charge of labour and productivity from time to time should go for inspection of tailors workshop to ascertain work related musculoskeletal disorders prevalent and the method of coping strategies adopted
3. The government, ministries of health/environment and other relevant agencies should embark on health education and awareness campaign on work related musculoskeletal disorders among tailors to enhance safety precautions among tailors
4. Tailors should be encouraged to attend seminars and workshop on the use of their equipment in order to prevent accident and injury.

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